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| 10/659,302  | 09/11/2003  | Nobumasa Suzuki      | P24196                         | 3567             |
| 7055 7590 03/09/2007<br>GREENBLUM & BERNSTEIN, P.L.C.<br>1950 ROLAND CLARKE PLACE<br>RESTON, VA 20191 |             |                      | EXAMINER<br>SHAFFER, RICHARD R |                  |
|   |             |                      | ART UNIT                       | PAPER NUMBER     |
|   |             |                      | 3733                           |                  |
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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/659,302  
Filing Date: September 11, 2003  
Appellant(s): SUZUKI ET AL.

**MAILED**  
**MAR 07 2007**  
**GROUP 3700**

BRUCE H. BERNSTEIN  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed January 25<sup>th</sup>, 2007 appealing from the Final Office action mailed May 25th, 2006.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

6,110,172

JACKSON

8-2000

extend. (n.d.). Dictionary.com Unabridged (v 1.1). Retrieved February 28, 2007, from Dictionary.com website: <http://dictionary.reference.com/browse/extend>

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### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

#### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

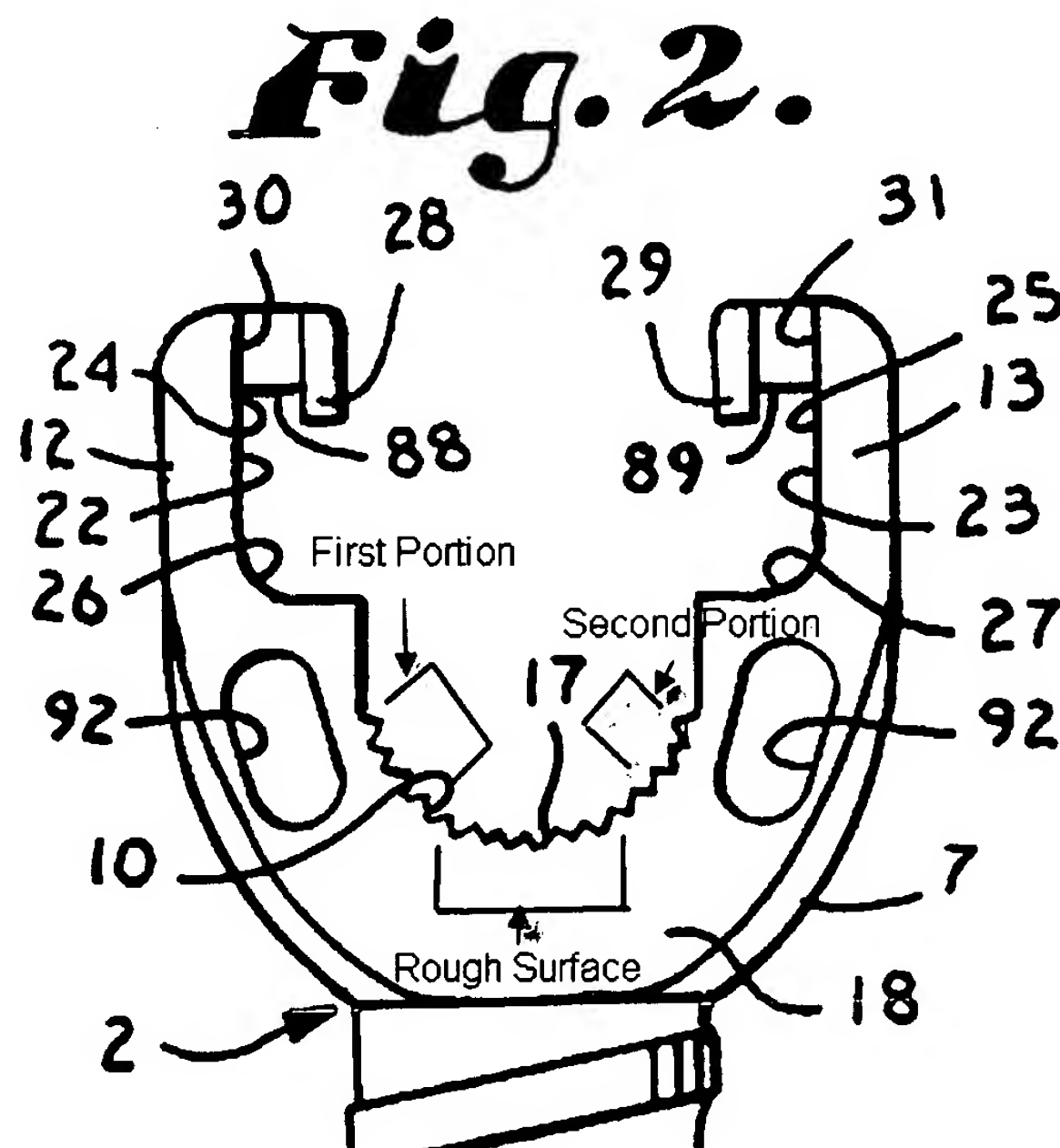
Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Jackson (US Patent 6,110,172).

Jackson discloses a device comprising: a screw portion (8); a head portion (7) with a groove/circular arc (10) to receive the rod (15); an engagement portion (23) for accepting the fixing device (3 and 4) which fixes the rod; and small projections (17) which inherently will eat into the rod, provided on both sides of the groove (see **Figures 1 and 3** showing the projections located on opposite sides as well as the ends). The projections (17) extend (*see definitions 17-19 from Dictionary.com stating that extend means to stretch out in length, duration, or in various directions and to increase in length, area, scope, etc*) along the groove as well as perpendicular to the longitudinal axis of the groove. Each projection (17) has a width (as shown in **Figure 2**) and a group of projections (17) can be interpreted as a “protruding portion,” which extend perpendicular to the longitudinal axis of the groove. The projections (17) are spaced away from the fixing device (3 and 4) and therefore deemed to be “outside the pressure fixing the device.” Clearly, they are not inside the fixing device as evidenced from the

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figures. Further, if one so desired, the device of Jackson could also be interpreted as having the fixing device be just element (4) thereby having the projections spaced away from the fixing device from a top view as well.

In regard to claim 2, it is clarified that the protruding portions can be considered any sub-group of the projections shown (such as designated by the image below). Therefore, there exists a portion between two projection portions that exists as a "rough surface" due to being ridged like the protrusions. Previously, it was not clearly described that the roughen statement as that the protrusions (17) would roughen the surface of the rod (15) in contact with the projections. It was not meant to mean that the protrusions would somehow roughen a recess between them. It was a line supporting the "biting" of the rod in that at minimum scratches would be formed on the rod demonstrating the "biting."



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**(10) Response to Argument**

**Claim 1:** Applicant argues that Jackson fails to disclose *“protruding portions configured to eat into the rod portion in both end sides of the circular arc rod engagement portion outside the pressure fixing device, the protruding portions extending in a direction substantially perpendicular to a longitudinal direction of the vertebra connecting member.”* The examiner has repeatedly stated that an object can extend in more than one direction. It has been acknowledged that the ridges are orientated to primarily run along the longitudinal direction of the groove to accept the rod. It has also been clearly stated that the protrusions each individually have a width that extends perpendicular to this axis as well as the portions taken as a group extend perpendicular as well. The examiner has merely applied a broad, yet very reasonable interpretation of the claimed language. Further, the interpretation is not as broad as possible due to applicant's use of “longitudinal direction of the vertebra connecting member.” This member is the screw inserted into the bone. Clearly, the screw has a vertical longitudinal axis. Therefore, even if the ridges could only be interpreted as extending along the longitudinal axis of the groove, it would still be perpendicular to the longitudinal axis of the vertebra connecting member.

In regard to eating in both end sides of the circular arc region. Since the projections are located at both ends, clearly they bite at the ends as well as the rest of the groove.

In regard to biting outside the pressure fixing device, the pressure fixing device is located above the projections, therefore the pressure fixing device and projections are

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spaced apart. The projections are therefore “outside” the bounds of the pressure fixing device.

**Claim 2:** Applicant argues claim 2 based upon misinterpretation or miscommunication. Applicant is under the impression that the examiner stated that the projecting portions would roughen a recess between them despite the description of the roughening being described in relation to the rod (15), which was to describe the inherency of “biting into the rod.” It was previously felt that since applicant was using the terminology “*portions*,” that clearly the projections themselves would be considered a rough recess between other groups of projections as more clearly described in this examiner’s answer.

**Claim 3:** Applicant again largely argues the same subject matter of claim 1 except that in this case applicant is using the claim language “*perpendicular to a longitudinal direction of the rod*.” The previous response to the arguments of claim 1 are applicable to claim 3 and are cited in defense of the rejection, except those directed towards a vertical longitudinal axis due to the “*perpendicular to a longitudinal direction of the rod*” which in a narrow sense would equate to the “groove” previously discussed.

In addition, with such claim language, it is not required that the rod be placed within the groove. Therefore, at other times, it is inherently capable if not inherent (e.g. during manufacture, packaging, or handling by the surgeon) that the ridges are orientated perpendicular to the rod the same as it is to the longitudinal axis of the screw.

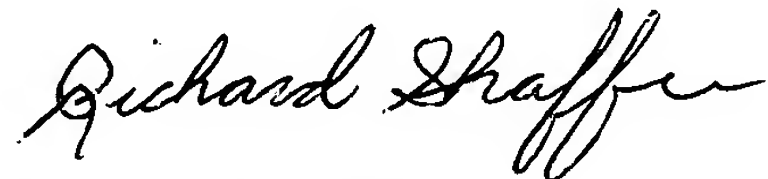
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**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

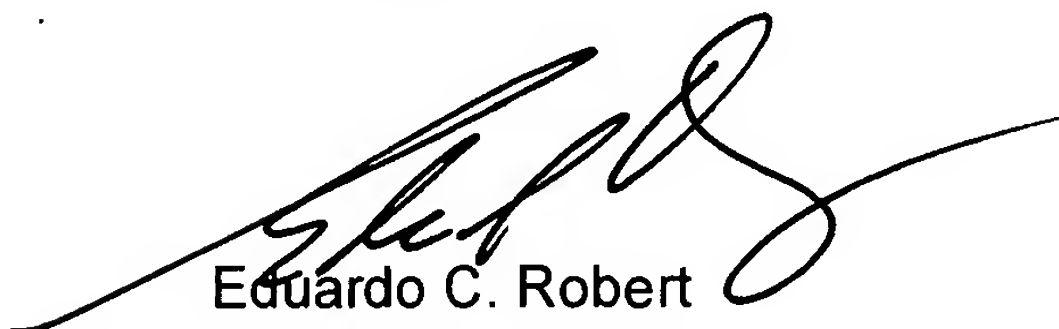
Respectfully submitted,



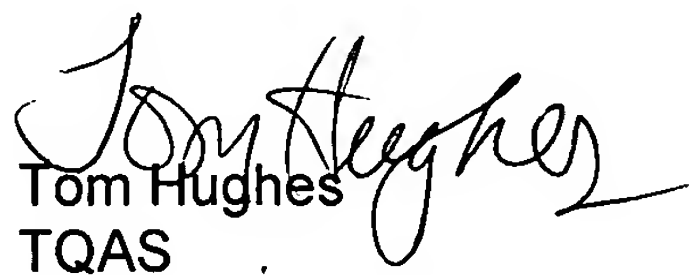
Richard R. Shaffer  
Assistant Examiner  
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R.R.S.  
February 28<sup>th</sup>, 2007

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*Dictionary.com Unabridged (v 1.1) – Cite This Source*

**ex·tend**   [ik-**stend**] [Pronunciation Key](#) - [Show IPA Pronunciation](#)

–verb (used with object)

1. to stretch out; draw out to the full length: *He extended the measuring tape as far as it would go.*
2. to stretch, draw, or arrange in a given direction, or so as to reach a particular point, as a cord, wall, or line of troops.
3. to stretch forth or hold out, as the arm or hand: *to extend one's hand in greeting.*
4. to place at full length, esp. horizontally, as the body or limbs.
5. to increase the length or duration of; lengthen; prolong: *to extend a visit.*
6. to stretch out in various or all directions; expand; spread out in area: *A huge tent was extended over the field.*
7. to enlarge the scope of, or make more comprehensive, as operations, influence, or meaning: *The European powers extended their authority in Asia.*
8. to provide as an offer or grant; offer; grant; give: *to extend aid to needy scholars.*
9. *Finance.* to postpone (the payment of a debt) beyond the time originally agreed upon.
10. to increase the bulk or volume of, esp. by adding an inexpensive or plentiful substance.
11. *Bookkeeping.* to transfer (figures) from one column to another.
12. *Law.*
  - a. *British.* to assess or value.
  - b. to make a seizure or levy upon, as land, by a writ of extent.
13. *Manège.* to bring (a horse) into an extended attitude.
14. to exert (oneself) to an unusual degree.
15. *Archaic.* to exaggerate.
16. *Obsolete.* to take by seizure.

–verb (used without object)

- 
17. to be or become extended; stretch out in length, duration, or in various or all directions.
  18. to reach, as to a particular point.
  19. to increase in length, area, scope, etc.
  20. *Manège.* (of a horse) to come into an extended attitude.

[Origin: 1250–1300; ME *extenden* < L *extendere* to stretch out. See EX-<sup>1</sup>, TEND<sup>1</sup>]

—Related forms

ex·tend·i·ble, ex·tend·a·ble, *adjective*

ex·tend·i·bil·i·ty, ex·tend·a·bil·i·ty, *noun*

—Synonyms 5. continue. See LENGTHEN. 6. enlarge; widen, dilate. 8. bestow, impart.

—Antonyms 1. shorten, contract.